



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,010	05/27/2005	Mikio Sahashi	TASH-9	1378
20311	7590	01/28/2008	EXAMINER	
LUCAS & MERCANTI, LLP			VORTMAN, ANATOLY	
475 PARK AVENUE SOUTH				
15TH FLOOR			ART UNIT	PAPER NUMBER
NEW YORK, NY 10016			2835	
			MAIL DATE	DELIVERY MODE
			01/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,010	SAHASHI ET AL.	
	Examiner	Art Unit	
	Anatoly Vortman	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 December 2007 (Election).
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
 - 4a) Of the above claim(s) 5-26 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3 and 4 is/are rejected.
- 7) Claim(s) 2 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 May 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1) Certified copies of the priority documents have been received.
 - 2) Certified copies of the priority documents have been received in Application No. _____.
 - 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/27/05.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 5-26, are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species. There being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/28/07.

Specification

2. The disclosure is objected to because of the following informalities: the specification is referring to the claims on p. 5-20. The references to the claims should be removed from the body of the specification in order to place the specification in compliance with the USPTO practice.

Further, the specification appears to be a literal translation from a foreign document and replete with cumbersome clauses that are not precise and concise, e.g.: "As the reset time of overload relay becomes longer than the positive characteristic thermistor 312, the motor 100 is ready to start" (p. 2, lines 11+). Applicant is required to carefully review the entire specification in order to make appropriate corrections.

Furthermore, the specification on numerous occasions recites that "an auxiliary positive characteristic thermistor connected parallel to the positive characteristic thermistor" (e.g. p. 6, lines 10-11). This is incorrect. As shown on Fig. 2 for example, said auxiliary positive

characteristic thermistor (14) connected parallel to the positive characteristic thermistor (12) and the snap action bimetal (18). Appropriate correction is required.

Claim Objections

3. Claim 1 is objected to because of the following informalities: claim recites, *inter alia*: “an auxiliary positive characteristic thermistor connected parallel to the positive characteristic thermistor”. This is incorrect. As shown on Fig. 2 for example, said auxiliary positive characteristic thermistor (14) connected parallel to the positive characteristic thermistor (12) and the snap action bimetal (18). Appropriate correction is required. For the examination purpose, said auxiliary positive characteristic thermistor is being interpreted as being connected parallel to the positive characteristic thermistor and the snap action bimetal.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, and 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over US/5,428,493 to Takeuchi et al. (Takeuchi).

Regarding claim 1, Takeuchi disclosed (Fig. 1, 2, 5, and 6) a starter of single-phase induction motor having main winding (61) and auxiliary winding (62) energized by alternating-current power source (8), comprising: a casing (20), a positive characteristic thermistor (1) connected in series to the auxiliary winding (62), an auxiliary positive characteristic thermistor (2) connected parallel to a snap action bimetal (3), said bimetal (3) connected in series to a series circuit of auxiliary winding (62) and positive characteristic thermistor (1) for sensing the heat from the auxiliary positive characteristic thermistor (2) and turning off when reaching a set temperature, and an enclosed compartment accommodated in the casing (20), for enclosing the snap action bimetal (3) and auxiliary positive characteristic thermistor (2) (Fig. 2A), but did not disclose that said auxiliary positive characteristic thermistor is connected parallel to the positive characteristic thermistor and the snap action bimetal.

It would have been obvious to a person of ordinary skill in the thermal switch art at the time of the invention to move the connection point of the auxiliary positive characteristic thermistor (12) upstream along the series circuit of auxiliary winding (62), beyond said positive characteristic thermistor (1), thus connecting said auxiliary positive characteristic thermistor in parallel to the positive characteristic thermistor (1) and the snap action bimetal (3), since such a simple and straightforward modification would allow for a complete disconnection of the positive characteristic thermistor (1) from the electrical source upon opening of the snap action bimetal (3), thus reducing consumption of the electrical power. Further, such a modification would amount to a routine optimization of the electrical circuit in a process of achieving optimal heat balance and optimal "turn on" / "turn off" characteristics of the bimetal (3). Such minor circuit adjustments and modifications (in this case a mere experimentation with series/ parallel

resistor circuits) have been notoriously known and widely used in the electrical arts at the time of the invention to improve upon similar devices. Therefore, applying the aforementioned known techniques to the circuit of Takeuchi would have yield predictable results (i.e. desired heat balance and optimal “turn on” / “turn off” characteristics of the bimetal) and would have been be obvious to a person of ordinary skill to try with reasonable expectation of success. *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

Regarding claims 3 and 4, the claims recite the process limitations pertained to the method of making the bimetal (i.e. by “drawing” and by “forming in a circular form in the center”). Even though the claims are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). It is the patentability of the product claimed and not of the recited process steps which must be established. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). It should also be noted that a “[p]roduct-by process claim, although reciting subject matter of claim in terms of how it is made, is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations”, *In re Hirao and Sato*, 190 USPQ 15 (Fed. Cir. 1976). Therefore, the claims have not been given patentable weight.

Allowable Subject Matter

6. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 2 recites, *inter alia*: “the snap action bimetal is composed of a movable contact plate for oscillating a movable contact point, a bimetal, and a plate spring of semicircular section interposed between first support point of the movable contact plate and second support point of the bimetal”. The aforementioned limitations in combination with all remaining limitations of claims 1 and 2, are believed to render the subject matter of claim 2 allowable over the prior art of record.

Conclusion

7. The remaining prior art made of record on PTO-892 was not relied upon, but is considered pertinent to Applicant's disclosure because of the teaching of various starters for single-phase electrical motors comprising PTC thermistors.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Thursday, between 10:00 am and 8:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anatoly Vortman/
Primary Examiner
Art Unit 2835

AV